Government of Bombay

Report

on the

Working of the Development Department

For the year ending 31st March 1928

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INTRODUCTION

The annual report of the Development Department for the year 1927-28 is divided into three parts :—

Part I.—The Back Bay Reclamation Scheme—submitted by the Chief Engineer, Back Bay Reclamation Scheme, with the report from the Chairman of the Sanitary Committee appointed in connection with the Scheme.

Part II.—The Industrial Housing Scheme—submitted by the Land Manager, Development Department.

Part III.—The Suburban Schemes—submitted by the Commissioner, Bombay Suburban Division.

2. The term of the two Advisory Committees—one for the City of Bombay and the other for the Bombay Suburban Division—in connection with the Bombay Development Scheme expired on 31st March 1927. The most important work of these Committees had been performed by them sitting as a Joint Committee, with one additional member, " to enquire into the activities of the Development Department and to report to Government as to how far and in what directions, such activities should be continued or eliminated." The Special Committee submitted in previous years their reports on the Bombay City Schemes including the Back Bay Reclamation Scheme and the Industrial Housing Scheme. Government, therefore, reconstituted the Special Committee, with the same personnel and with the Secretary to Government in the Development Department as Chairman, to complete the enquiry which they had begun regarding the suburban schemes. A list of the members of the Committee is given in appendix I.

3. In accordance with the recommendation made in paragraph 175 of the Mears' Committee's report, Government appointed a small committee to advise them on all matters regarding the Back Bay Reclamation Scheme which are referred to the committee for opinion. A list of the members of this committee is given in appendix II.

Another committee was appointed to consider and report on the proposals of the Consulting Surveyor to Government for the layout of blocks 1, 2 and 7 in the Back Bay Reclamation Scheme. A list of the members of this committee is given in appendix III.

4. The Back Bay Reclamation Scheme remained in charge of the Chief Engineer, Back Bay Reclamation Scheme under the control of the Department, while the engineering aspects of the Industrial Housing Scheme and the Suburban Schemes, which were committed to the charge of the Public Works Department in 1926-27, continued to remain with that Department under the Superintending Engineer, Northern Circle. The management of the Development Department chawls and the work in connection with the town planning schemes and the disposal of lands in the suburban schemes continued to remain under the control of the Land Manager, Development Department.

5. The Old Lunatic Asylum Site and the Cooly Camp Site, known as the Back Bay House property, Colaba, measuring 20,786 square yards, together with the buildings standing thereon—excepting the buildings and huts on the cooly camp site—has been sold to the military authorities for Rs. 4,40,000 and will be transferred to them not later than the 31st December 1929. The purchase price was paid at the close of the year under report.

R. D. BELL,

Secretary to the Government of Bombay,

Development Department.

APPENDIX I

Names of members of the Special Advisory Committee reconstituted for the purpose of completing their report on the Suburban Schemes for 1927-28.

	Name of member	Constituency
1.	R. D. Bell, Esq., C.I.E., I.C.S. ..	Secretary to Government, Development Department (Chairman).
2.	Sir Vasantrao A. Dabholkar, Kt., C.B.E., M.L.C.	The Bombay Municipal Corporation.
3.	Fazal Ibrahim Rahimtoola, Esq., B.A., M.L.A.	
4.	R. H. A. Delves, Esq., F.S.I. ..	The Bombay Improvement Trust.
5.	Major G. C. Richardson ..	The Bombay Chamber of Commerce.
6.	J. B. Petit, Esq., M.L.C. ..	The Millowners' Association, Bombay.
7.	Manu Subedar, Esq. ..	The Indian Merchants' Chamber, Bombay.
8.	L. U. Mongini, Esq. ..	The Bombay Presidency Trades' Association.
9.	W. H. Neilson, Esq., O.B.E. ..	The Bombay Port Trust.
10.	S. K. Bole, Esq., M.L.C. ..	Nominated to represent working classes in Bombay City.
11.	Joseph Baptista, Esq., Bar.-at-Law (resigned in August 1927).	
12.	A. N. Surve, Esq., B.A., LL.B., Advocate.	Nominated by Government.
12.	Ig. D'Monte, Esq. ..	The Bandra Municipality.
13.	D. D. Rodrigues, Esq. ..	The Kurla Municipality.
14.	C. J. Hansoti, Esq. ..	The Ghatkopar-Kirol Municipality.
15.	Janmejay Chhabildas, Esq., M.A. (Camb.).	The Notified Area Committees.

APPENDIX II

Names of members of the Standing Advisory Committee appointed to advise on all important matters regarding the Back Bay Reclamation Scheme for 1927-28.

	Name of member	Constituency
1.	Sir Leslie Hudson, Kt., J.P., M.L.C. (Chairman).	The Bombay Chamber of Commerce.
2.	Manu Subedar, Esq. ..	The Indian Merchants' Chamber, Bombay.
3.	J. B. Petit, Esq., M.L.C. ..	The Millowners' Association, Bombay.
4.	Hooseinbhoy A. Lalljee, Esq. M.L.C.	The Bombay Municipal Corporation.
5.	J. McClure, Esq. ..	Nominated by Government.
6.	J. W. Mackison, Esq., C.I.E., J.P.	
7.	R. H. A. Delves, Esq., F.S.I.	

APPENDIX III

Names of members of the Back Bay Layout Committee appointed to consider and report to Government on the layout of blocks 1, 2 and 7 in the Back Bay Reclamation Scheme for 1927-28.

Name of member

1. Dr. S. S. Batliwala, L.M. & S., J.P. (Chairman).
2. Sir Leslie Hudson, Kt., J.P., M.L.C.
3. Walchand Hirachand, Esq., J.P.
4. J. W. Mackison, Esq., C.I.E., J.P.
5. N. D. Kanga, Esq.
6. Hooseinally M. Rahimatoola, Esq., B.A., M.L.C., J.P.
7. C. W. E. Arbuthnot, Esq., B.E., B.A. (R.U.I.), J.P.
8. R. H. A. Delves, Esq., F.S.I.

PART I

BACK BAY RECLAMATION SCHEME

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ROYAL ASIATIC SOCIETY.

No. 1531 of 1928.

DEVELOPMENT DEPARTMENT.

BACK BAY RECLAMATION SCHEME.

CHIEF ENGINEER'S OFFICE:

Old Custom House Yard, Fort,
Bombay, 20th June 1928.

From

K. S. FRAMJI, Esquire, C.I.E.,
Chief Engineer, Back Bay Reclamation Scheme, Bombay;

To

THE SECRETARY TO GOVERNMENT,
Development Department, Bombay.

Subject.—Annual Report 1927-28—Back Bay Reclamation Scheme.

Sir,

In accordance with the decision of the Legislative Council at the Budget Session of February-March 1927, the operations in connection with the Back Bay Reclamation Scheme are now being confined to the reclamation and development of Blocks Nos 1, 2 and 7 and the reclamation, without development, of Block No. 8. There will also be a roadway along the existing foreshore connecting the main roadway, at the south end of Block No. 2, with that at the north end of Block No. 7. In view of this decision and curtailment of work, it has been found possible to retrench the following appointments in the superior establishment during 1927-28, besides a few in the subordinate establishment:—

(1) Executive Engineer, Projects.
(2) Executive Engineer, Dredging Section.
(3) Deputy Dredging Master.
(4) Two Assistant Dredging Master.
(5) Two 1st Engineers on dredgers.

2. During the year under report Government appointed two Committees:—

(1) An Advisory Committee, consisting of seven members, holding office for three years, to advise Government on all matters regarding the Back Bay Reclamation Scheme which are referred to them for their opinion. This Committee has thus assumed the duties hitherto performed, in respect of the Back Bay Reclamation Scheme, by the old Advisory Committee attached to the Development Directorate.

The Committee met often during the year and disposed of several matters placed before it, the most important being the tenders for the Dry filling of Block No. 8 and for the Timber gantry for Block No. 2; also the disposal of the question whether Block No. 2 should be filled by dredged filling or dry filling. The Committee after going carefully into the question of comparative costs, speedy execution of work,

quantity and nature of material available for Dredging in Back Bay, etc., decided in favour of wet filling of Block No. 2 and this decision has been accepted by Government. Dredging into Block No. 2 will, therefore, be undertaken in November 1928, prior to which the timber gantry for carrying the shore pipes to Block No. 2 is being got ready.

(2) A special Lay-out Committee consisting of seven members representing the Bombay Municipality, the Chamber of Commerce, the Indian Merchants' Chamber, etc., to consider and report to Government on the proposals of the Consulting Surveyor to Government for the lay-out of Blocks 1, 2 and 7 in the Back Bay Reclamation Scheme.

The deliberations of this Committee are not yet concluded. As soon as it submits its report and the lay-out plan is finally decided by Government, the work of preparing estimates for roads, lighting, drains, sewers, etc., will be taken in hand.

3. The operations of the year were as described below.

4. *Harbour Dredging.*—Dredging operations in the harbour in connection with the filling of Block No 7, which started in October 1926, ceased on the 5th May 1927 after which the plant was laid up for the monsoon, during which the dredger "*Kalu*" and certain of the attendant craft required for work in Back Bay the following season 1927-28 were overhauled and reconditioned. The level of the pumped filling in Block No. 7 being up to or above the level of the overflow by the end of the season, the "*Colaba*," attendant craft and floating pipe line units, not required in Back Bay the following season, were placed out of commission. The "*Colaba*" and attendant craft were all drydocked, the hulls cleaned and painted, but no repairs were carried out. After being drydocked, the crews of these vessels were all paid off, with the exception of the minimum required to look after them and turn the engines over periodically by hand. None of the floating pipe line units, not required in the Back Bay, has been repaired or painted since being placed out of commission. The performance of the plant dredging in the harbour from the commencement is shown below :—

Season	Number of pumping hours worked	Quantity of material dredged as ascertained from soundings	
		Per season	Per pumping hour
"*Sir George Lloyd*" and "*Colaba*"		C. yds.	C. yds.
1923-24	843	859,858	1,020
1924-25	1,473	1,261,986	856
1925-26	1,905	1,828,303	959
1926-27	918	1,429,406	1,557
"*Kalu*" and "*Colaba*"			
1926-27	992	603,929	609

5. The Union Insurance Society of Canton, with whom the dredger "*Sir George Lloyd*" was insured have ultimately accepted the liability for the damage caused to her engines and other parts of machinery when working in the harbour on 23rd December 1926. The new engines, etc., have been ordered out from Messrs. Wm. Simons and Co. of Renfrew, the makers of the dredger, and are expected shortly. On receipt of the new parts the vessel will be reconditioned at the expense and cost of the Insurance Company.

6. *Dredging in Back Bay.*—Dredging operations in Back Bay for the season 1926-27 ceased on 11th January 1927, when, for the reasons given in paragraph 8 of my report on the working of the Back Bay Reclamation Scheme for the year 1926-27, the "*Kalu*" was taken round to the harbour to replace the "*Sir George Lloyd*", which broke down in December 1926.

7. The Dredger "*Kalu*" was taken round to Back Bay for the new season's work 1927-28 on the 23rd October 1927 and the intermediate pumping Station (or Booster) "*Jinga*" on the 20th November. The dredger "*Kalu*" commenced dredging operations, cleaning out the berth for the Booster "*Jinga*" and pumping into Block No. 1, on Monday, 31st October 1927. This is the earliest date on which it has so far been possible to commence dredging operations in Back Bay. As the general weather conditions in October 1927 appeared to indicate a complete cessation of the monsoon and monsoon swell, it was considered to be safe to commence operations. On the 12th November 1927, however, a bad storm from the North-east was experienced, but owing to the approach of this having been observed by the dredging staff and arrangements made for the safety of the craft and Floating pipe line units, very little damage was sustained, only 4 units being damaged and two of these only very slightly. Had suitable precautions not been taken serious damage and delay might have resulted.

8. The work of cleaning out the berth for the "*Jinga*" and further floatation for the "*Kalu*" was completed by the 3rd November 1927 and the "*Kalu*" continued dredging, unaided, until 26th November, when the "Jinga" was brought into the line. The work of connecting up the floating pipe line to the "*Jinga*" and from "*Jinga*" to the shore was completed by the evening of the 28th November. The "*Kalu*" resumed dredging operation on the 29th November with the assistance of the Booster "*Jinga*". Owing to the large percentage of fine sand met with, and the pumps of these dredgers not being built for pumping sand, some trouble was experienced, during the first month the "*Jinga*" was working, owing to the gun metal sleeve on the boss of the impellor of this vessel wearing badly. Had this been allowed to continue there was grave risk of the bearing giving way and causing stoppage of work. Hence it was considered necessary to remove the "*Jinga*" from the line, take her round to the Alexandra Dock to have the impellor removed and a mild steel sleeve fitted to same. This was done at the end of December, and advantage was taken of the occasion to fit a general service Water Pump on the "*Jinga*" to pump water into the gland of the main pump under pressure and thus exclude the sand

from the gland and bush. This latter proved to be very effective and no further trouble was experienced throughout the remainder of the season with this sleeve and gland. In point of fact the behaviour of the "*Jinga*," throughout the remainder of the season was highly satisfactory, and reflects great credit on the dredging staff, not only on account of the satisfactory output of the vessel but also on account of the general running, which latter was due to a large extent to the manner in which the vessel had been stiffened and reconditioned. The vibration of the vessel, whilst working, was considerably less than experienced with the "*Colaba*," even after that vessel had been stiffened.

9. It may here be mentioned that the dredger "*Jinga*" was designed to pump 2,000 cubic yards of soft clay per hour through a pipe line of 4,500 feet, and during this last season it was necessary for her to pump through a length of 5,300 feet or over one mile. This she did with a discharge velocity of about 10 feet per second, thus showing not only that the vessel was capable of pumping through this length of pipe line with satisfactory discharge velocity, but also that she was handled and worked in a very efficient manner by the staff. The output per hour, as well as the output for the year, obtained by "*Kalu*" and "*Jinga*" far exceeded that of any previous season. This was, of course, due to some extent to the more suitable material met with, but also to the general efficient handling of the dredger.

The performance of the plant, dredging in Back Bay, from the commencement, is shown below. The operations for the season 1927-28 ended on 11th April 1928, when owing to the approaching monsoon swell it was considered unsafe to continue operations any longer. Besides Block No. 1 was practically filled up by then.

Seasons	Number of pumping hours worked	Quantity of material dredged as ascertained by soundings	
		Per season	Per pumping hour
"*Kalu*"		C. yds.	C. yds.
1924-25	111	15,640	141
1925-26	918	372,925	406
1926-27	553	220,072	398
"*Kalu*" and "*Jinga*"			
1927-28	1,702	1,016,219	597

10. The maximum output attained by the "*Kalu*" during the season was 950 cubic yards per hour; that was during the week ending 14th December 1927. This is much below the builders' specified output for this vessel, but considering that the material pumped consisted

principally of stiff clay, sand and silt, also the very long length of the pipe line, the output may be said to be very satisfactory. The average for the whole season was 597 cubic yards per hour which is practically the same as what she attained in the harbour in the season of 1926-27 (609 cubic yards per hour). Considering that the material obtained in the Back Bay was stiffer and harder, and the pipe line was very long, the performance of the "*Kalu*" during 1927-28 was on the whole very satisfactory. It was in view of the improved output of the dredger during the first two months of the last season, and consequent lower cost of pumped filling compared to dry filling, that it was decided by Government, on the recommendation of the Advisory Committee, to reclaim Block No. 2 with pumped filling instead of dry filling. As a result of this decision it is necessary to construct a new pipe gantry from the north-west corner of Block No. 2 to carry the discharge pipe line, over the rocky foreshore, from the floating pipe line on to the sea wall. This work was commenced on 26th February 1928, and will be completed before the dredging operations into Block No. 2 commence.

11. The dredged filling of Block No. 7 was completed in May 1927. Since then the block has been allowed to dry and monthly observations are being made of the settlement which is taking place in the material which, when freshly deposited in the block, had initially bulked. These show that in 12 months the bulked material has settled by about 30 per cent. of its original volume in the block. Fresh cross sections have recently been taken and when the quantities are calculated therefrom a correct estimate of the shrinkage will be arrived at. The murum topping of this block will not be taken in hand till after that of Block No. 8 is completed.

12. *Dry Filling.*—The principal work done during the year was the murum topping of block No. 8. The filling consisted of murum and earth brought by train from the Department's quarries at Kandivli—a distance of about 21 miles to the Reclamation at Chowpatty, Bombay.

13. Up to the end of November 1927, this work of dry filling was carried out departmentally, as in the previous year, one pieceworker doing the excavation and loading of the wagons at the quarries, and another pieceworker doing the unloading of the wagons on the Reclamation, all other operations being performed departmentally. From the 1st of December 1927, however, a contract was entered into under which all the operations were to be performed by the contractors, and under which they were to get the material from their own quarries. Considerable difficulty and delay, however, was experienced in opening up their own quarries with the result that the use of the departmental quarries at Kandivli had to be permitted to the contractors for over a month at the beginning. About 5,000 tons of material per day are brought in of which about 2,000 tons comes from the contractors' quarries at Malad and about 3,000 tons from quarries at Kandivli.

14. The cost of the work done departmentally during the year up to the end of November, when the change over to the contract system was made, worked out to an overall rate of Rs. 1-3-8 per ton. The final

costs for the remaining period of the year work out to slightly under Rs. 1-2-0 per ton, out of which Re. 0-15-6 is paid to the contractors and the remainder is for the various departmental expenditure. The change-over to the contract system has, therefore, effected a small saving; the progress made by the contractors, though somewhat disappointing at the beginning, improved subsequently and they have been supplying at the rate of about 5,000 tons per day.

15. The total quantity of dry filling brought in during the year was 10,18,000 tons of which 22,000 tons was selected earth, which was deposited on an area of about 20 acres at the extreme south end of the Reclamation in order to make this piece suitable for use by the Military authorities, as a parade ground, and playing ground for the troops. This area was taken over by the Military authorities at the end of November 1927 and paid for by them at the rate of Rs. 20 per square yard. This sum of Rs. 20·74 lakhs was adjusted by reduction of the advance obtained by the Government of Bombay from the Government of India at 6½ per cent. for development purposes during the financial year 1922-23. Further, about 95,000 tons were put into Block No. 1 during the monsoon in order to keep down overhead charges and usefully to utilise the rolling stock at a time when the ground in Block No. 8 was too wet to run trains over it. Also 19,000 tons were used in Block No. 2 for the purpose of sealing the sea-wall so that the dredged material which overflowed from Block No. 1 should not escape. This has proved very effective and the bed level in Block No. 2 has been raised by 3 or 4 feet by the deposition of the overflow of the dredging from Block No 1. About 7,000 tons were used for various odd purposes and the balance of 8,75,000 tons was put into Block 8.

16. At the end of March 1928, an area of a little less than 4,00,000 square yards yet remained to be covered in Block 8 and judging from the experience of the other portion that has been covered, it is anticipated that an average depth of 2 yards of dry filling at least will be required to cover this remaining area, due to heavy natural settlement in the soft dredged material and further settlement when the load of dry filling is put on it.

17. In addition to the dry filling brought in by train, about 1,18,500 cubic yards of building rubbish, etc., were collected by motor lorries during the year and tipped into Blocks 1 and 2 behind Churchgate Railway Station at a cost of about 10 annas per cubic yard.

18. *Kandivlee Quarry.*—The murum required for topping of Block No. 8 and other purposes in connection with Back Bay Reclamation Scheme was obtained from the Kandivlee quarries till December 1927. Thereafter the Government quarries were shut down and the contractors obtained all the dry filling from their own lands at Kandivlee, as also from their quarries at Malad.

After the fixing of the new contract, a large area of land, previously notified for acquisition for quarrying purposes, has been denotified as the lands were not required any longer, because, under the terms of the

contract, the contractors were required to obtain murum, etc., from their own lands.

The workshop at Kandivlee has been practically entirely closed and all heavy repairs to wagons and machinery are being done at the Marine Lines workshop.

19. *Storm Water Drains.*—Of these No. 6, which forms the boundary between Blocks 2 and 3, is the only one that was in hand during the year and very satisfactory progress was made on it. The staff engaged on it deserves much credit both for the rapid progress made and the low cost at which the work was executed during the year. This drain has a total length of 2,310 feet of which about 880 feet were done in previous years. During the year under report about 1,200 Rft. of this drain were done, giving a steady average of 100 feet a month, and it is anticipated that the work will be completed by the middle of June 1928. The drain forms the southern boundary of Block No. 2, into which dredging operations will commence after the rains. After it is completed there will be no other main storm water drain to be constructed as Nos. 1, 2, 7 and 8 are already completed and Nos. 3, 4 and 5 are, for the present, abandoned, as Blocks Nos. 3, 4, 5 and 6 are not to be reclaimed. Storm Water Drains Nos. 3 and 4, which are at the South end of Blocks Nos. 5 and 4 respectively, have been partially done.

20. *Other Works.*—There is nothing particular to mention under this head except that a certain amount of heavy stone was deposited in front of the sea-wall prior to the monsoon of 1927 in order to raise one or two portions of the rubble mound which had sunk slightly. This mound and the sea-wall passed safely through the monsoon without any appreciable damage.

I have the honour to be,

Sir,

Your most obedient servant,

K. S. FRAMJI,

Chief Engineer, Back Bay Reclamation Scheme.

REPORT OF THE WORK DONE BY THE SANITARY COMMITTEE, BACK BAY RECLAMATION SCHEME, FROM 1ST APRIL 1927 TO 31ST MARCH 1928

1. During the year, 12 meetings of the Committee were held at the Back Bay House and the reclamation works were also inspected with the Chief Engineer and the Sanitary and Medical Officer.

2. Lieutenant-Colonel F. P. Mackie, O.B.E., M.D., I.M.S., continued as Chairman during the whole year.

3. Government under their Memorandum No. B-1/7-S.C. of 12th May 1927 sanctioned a grant of Rs. 350 for contingent expenditure of the Committee for the official year 1927-28.

4. In June 1927, Major E. F. W. Mackenzie, O.B.E., R.A.M.C., resigned from the Committee on his completing the tenure of his appointment as Deputy Assistant Director, Hygiene, Bombay District, when the following resolution was passed :

> " The Committee place on record their high opinion of the valuable help given by Major E. F. W. Mackenzie, O.B.E., R.A.M.C., as a Military Member of the Committee."

Major R. A. Anderson, M.B., F.R.F.P.S., R.A.M.C., who succeeded him was appointed a member in his place.

5. Several meetings were taken up in the discussion of the question relating to the Cooly Camp in the Back Bay House. The Military Authorities pressed for its removal as it was considered a source of not only a potential but an actual menace to the health of the troops. At its meeting in September last, the Committee gave their final opinion in a letter to the following effect :—

> " The Cooly Camp is not only a potential but an actual menace to the health of the troops stationed in Colaba and recommend its removal."

The Committee regrets that the Directorate has not so far seen its way to carry out the recommendation of the Committee in this respect.

The Camp still exists but a barbed wire fencing has been fixed near it and arrangements are made for preventing the Coolies wandering about the reclaimed area.

6. In February 1928, the Committee was asked to give their opinion on another temporary Camp to be located on the west face of Plot No. 8 between the scar edge of the dry filling and the sea-wall. The site was approved of as a temporary measure on certain conditions.

7. The Medical, Sanitary and Anti-Malarial operations connected with the reclamation scheme were in charge of Captain B. S. Chalam who performed his duties to the entire satisfaction of the Committee.

8. Government under their resolution No. S.C. 1201 of 12th July 1927 extended for a further period of two years with effect from 23rd May 1927 the temporary appointment of Captain B. S. Chalam "for the

anti-mosquito operations and the general sanitation of the reclamation areas in the Back Bay Reclamation Scheme of the Development Department."

9. Captain B. S. Chalam, the Medical and Sanitary Officer, was permitted to attend as delegate the Seventh Congress of the Far Eastern Association of Tropical Medicine in Calcutta in December 1927.

10. The labour force connected with the scheme was housed in three separate Camps, one in Charni Road and two in Colaba. The average total strength was approximately 1,800.

11. There were no special diseases prevalent in these camps. There were 20 deaths amongst the inmates of the Camps from general diseases, 7 being from pneumonia.

12. The anti-malarial operations consisted of regular inspection and treatment of all actual and likely breeding places of mosquitoes. Weekly house to house inspection was made in the Colaba area to investigate the prevalence of mosquitoes, both by the Military and the Reclamation staff; at every such inspection a questionnaire card was presented to the occupants of the houses where they were requested to state if they were troubled with mosquitoes. A catch of adult mosquitoes was carried out from time to time both in the reclamation Camp and the British Troops barracks at Colaba. Very few adult mosquitoes were caught during these inspections.

13. During the rainy season a few larvæ of anopheles mosquitoes were detected here and there in the fissures and pools in the reclaimed areas but they were not allowed to reach the pupal stage and the areas were frequently treated with larvacides.

14. The following table shows the ratio of admissions per 1,000 of strength for malaria amongst the British Troops in the British Military Hospital, Colaba, in Bombay.

Before the commencement of reclamation anti-malarial operations		After the commencement of reclamation anti-malarial operations	
Year	Ratio	Year	Ratio
1921	972·46	1923	152·53
1922	387·14	1924	238·27
		1925	165·05
		1926	180·48
		1927	150·41

Thus in 1927 the ratio of admission per 1,000 of strength compares favourably with the previous years and was the lowest since the commencement of the anti-malarial operations in Colaba.

15. The spleen and parasite rates of the children in the Colaba reclamation Camp in 1927 were as under :—

Spleen Rate.—Out of 66 children examined only in 3 cases the spleen was found enlarged, giving a percentage of 4-5.

Parasite Rate.—Out of 66 children examined parasites were found in 4, giving a percentage of 6·00.

16. The anti-malarial staff consisted of one Medical and Sanitary Officer, one Malaria Inspector and 12 Coolies.

17. The Sanitary Staff consisted of two Sanitary Inspectors and 22 Sweepers.

18. The Medical staff consisted of two Sub-Assistant Surgeons, one Compounder and three dispensary servants.

19. *Cost of Operations :—*

	Rs.
Medical and Sanitary Officer at Rs. 850 per mensem	10,200
House and Car Allowances	4,440
Total ..	14,640
Medical	4,250
Anti-malarial	10,522
Sanitary	11,108

20. Captain Chalam's report on the Medical and Sanitary transactions for the year is attached hereto.

21. The Committee again cordially acknowledge the valuable services rendered by Dr. K. B. Shroff, L.M. & S., D.P.H., D.T.M., as Honorary Secretary since its inception five years ago and desire that they may be brought again to the notice of Government.

K. B. SHROFF,
L.M. & S., D.P.H., D.T.M.,
Honorary Secretary,
Sanitary Committee,
Back Bay Reclamation Scheme.

F. P. MACKIE,
Lieut.-Col., I.M.S.,
Chairman, Sanitary Committee,
Back Bay Reclamation Scheme.

Annual Report of Medical and Sanitary transactions for the year ending December 1927

The Medical, sanitary and anti-malarial operations connected with the reclamation scheme were in my charge during the year under report. The labour connected with the scheme is housed in three separate camps situated, one behind Charni Road Station and the other two in Colaba. The superior and subordinate staff connected with the scheme, the labour engaged on the works and the crew on the dredgers, all these get free medical attention and the average total strength of persons under these categories during the year under report was approximately 1,836.

Hospital Accommodation.—An out-door dispensary is attached to each of the three reclamation camps. Indoor hospital accommodation is not provided but serious cases requiring prolonged treatment or major operations are sent to any of the local Civil Hospitals. The total number of cases sent to the Civil Hospitals from the Reclamation Camps during the year under report was 19. One bed however is equipped to receive and detain in these dispensaries any serious case till such time as arrangements can be made to send it to a Civil Hospital.

The total number of Out-patients during the year was as follows :—

New cases only	7,334
Old and new cases	23,890

The number of minor surgical operations performed during the year was 231.

The total number of persons vaccinated during the year was 1,353.

The total number of persons inoculated against Cholera during the year was 1,178.

Prevailing Diseases.—A very large majority of cases attending the dispensaries consists of minor injuries which is to be expected from the nature of the work they are engaged in. Otherwise there was no special prevailing disease.

Epidemics.—There was no epidemic of any disease in any of the camps during the year under report.

Death.—The total number of deaths in the camps during the year under report was 20.

(1) V. D. H.	2
(2) Broncho Pneumonia	4
(3) Pneumonia	3
(4) T. B. Lungs	1
(5) T. B. Peritonitis	1
(6) Rickets	3
(7) Acute Bronchitis	1
(8) Premature birth	2
(9) Still born	2
(10) Pernicious Anæmia	1
	20

Isolation Camps.—There is no isolation camp at present. Its necessity might be considered by the Sanitary Committee.

Sanitation.—One day every week is set apart in each Camp when every room is emptied, bedding boxes, etc., are brought out and a disinfectant is sprayed all over.

Rat destruction is carried out throughout the year by setting traps in the Camps and thus a good number of rats is accounted for.

Bazars in the Camps are under strict supervision and all eatables such as sweets, cakes, etc., are required to be kept in glass cases.

Dust bins with well fitting lids are put on raised cement platforms in sufficient numbers for each row of chawls to prevent accumulation of rubbish in and about the rooms. All latrines are of the flushing type. Separate latrines and bathing places are provided for men and women.

Anti-Malarial Operations.—As usual the anti-malarial operations consisted of regular inspection and treatment of all actual and likely breeding places of mosquitoes. Weekly house to house inspection is made in the Colaba area to investigate into the prevalence of mosquitoes both by the military and reclamation staff; at every such inspection a questionnaire card is presented to the occupants of the houses where they are requested to state if they are troubled with mosquitoes. From the statistics received from the British Military Hospital, Colaba, it is noted that the ratio of admissions per 1,000 of strength for Malaria amongst the British Troops in Bombay in 1927 was 150·41. This figure compares very favourably with previous years and is the lowest since the commencement of the Anti-Malarial operations in Colaba. The following table compares this ratio with that of previous years :—

Ratio of admissions per 1,000 of strength for Malaria amongst the British Troops in Bombay

Before the commencement of reclamation anti-malarial operations		After the commencement of reclamation anti-malarial operations	
Year	Ratio	Year	Ratio
1921	972·46	1923	152·53
1922	387·14	1924	238·27
		1925	165·05
		1926	180·48
		1927	150·41

Spleen and parasite Index of the Colaba Reclamation Camp taken in 1927 was as follows :—

Spleen Rate

Age	No. examined	Not Palpable	One finger	2 to 3 fingers	Hand breadth	Up to umbilicus	Percentage
							Per cent.
Under 2 years	4	3	..	..	..	1	25
Between 3 and 5 years ..	35	33	1	1	..	..	5·7
Between 6 and 10 years ..	27	23	..	..	..	..	*Nil*
Total ..	66	63	1	1	..	1	4·5

Parasite Rate

Age	Number examined	Parasite found	Percentage
			Per cent
Under 2 years	4	1	25
Between 3 and 5 years	35	2	5·7
Between 6 and 10 years	27	1	3·7
Total ..	66	4	6

Plasmodium Malarial. Plasmodium Vivax. Plasmodium Falciparum.
Nil. 4 *Nil.*

Staff and Cost of Operations

The staff consisted of the following :—

Medical and Sanitary Officer	One.
Sub-Assistant Surgeons	Two.
Sanitary Inspector	One.
Sanitary Sub-Inspector	One.
Compounder	One.
Dispensary Servants	Three.
Sweepers	Twenty-two.
Anti-malarial coolies	Twelve.

Allocation	Estimated expenditure for the year	Amount actually spent
	Rs.	Rs.
Sanitary	11,890	11,108
Anti-malarial	11,060	10,522
Medical	4,910	4,250

Medical and Sanitary Officer

Grade Rs. 650—50—900

	Per mensem
	Rs.
Drawing now	850
House-rent	220
Car allowance	150
Sub-Assistant Surgeon	172 *plus* 5 = 177
Do.	172 *plus* 20 = 192
Sanitary Inspector	245
Sanitary Sub-Inspector	140
Compounder	50

Members of the Sanitary Committee, Development Department, for 1927-28

1. Lieut.-Colonel F. P. Mackie, O.B.E., M.D., M.Sc., F.R.C.P., F.R.C.S., I.M.S., Director, Haffkine Institute, Chairman.
2. Lieut.-Colonel W. M. Houston, M.B., B.Ch., D.P.H., D.T.M., I.M.S., Port Health Officer.
3. Dr. J. E. Sandilands, M.C., M.D., D.P.H., Executive Health Officer, Bombay Municipality.
4. Major R. A. Anderson, M.B., F.R.F.P.S., R.A.M.C.
5. Khan Bahadur Dr. N. H. Choksey, C.I.E., M.D.
6. Dr. H. M. Masina, L.M. & S., F.R.C.S.
7. Lieut.-Colonel R. Row, O.B.E., M.D.
8. Dr. P. A. Dalal, L.M. & S., D.T.M. & H.
9. Dr. Sorab C. Hormusjee, M.D., D.P.H.
10. Dr. K. B. Shroff, L.M. & S., D.P.H., D.T.M.
11. Dr. J. S. Nerurker, B.Sc., L.M. & S., D.P.H. (Cantab.), Deputy Executive Health Officer, Bombay Municipality, in charge of the Municipal anti-malarial operations.

PART II

INDUSTRIAL HOUSING SCHEME

No. L.M. 128-A/(S.B.)

OFFICE OF THE LAND MANAGER,
DEVELOPMENT DEPARTMENT :
Old Custom House Yard, Fort,
Bombay, 10th August 1928.

From

R. D. BELL, Esq., C.I.E., I.C.S.,
Land Manager,
Development Department ;

To

THE SECRETARY TO THE GOVERNMENT OF BOMBAY,
Development Department.

Subject.—Annual Report on the administration of the Industrial Housing Scheme for the year 1927-28.

Sir,

I have the honour to submit the annual report on the administration of the Industrial Housing Scheme for the year ending the 31st March 1928. The scheme comprises 207 chawls of 80 rooms each (with one exception of 64 rooms) in four different areas :—

TABLE I

Chawl areas

	Chawls	Rooms
DeLisle Road	32	2,560
Naigaum	42	3,344
Worli	121	9,660
Sewri	12	960
Total ..	207	16,524

Chawls in use

2. During the year, twenty-seven new chawls were thrown open to occupation by the working classes. The figures of occupied chawls in each area at the beginning and end of the year are as follows :—

TABLE II

Chawls in use

Locality	April 1927	March 1928
DeLisle Road	29	28
Naigaum	24	37
Worli	32	46
Sewri	11	12
Total ..	96	123

The progress in opening new chawls was maintained at Naigaum and Worli till the end of 1927 when a partial mill strike caused a set-back. At this date the low scale of rents at Worli had made this chawl area easily the most popular. Two of the twenty-seven new chawls opened to occupation during the year were leased *en bloc*, one to the Bombay Municipality for housing the menials of the King Edward Memorial Hospital and Seth Gordhandas Sunderdas Medical College and other to Government for housing the G. I. P. and M. & S. M. Railway Police.

Scale of rents

3. The scale of monthly rents per room at the close of the previous year was as follows :—

TABLE III

Scale of rents in March 1927

—	DeLisle Road	Naigaum	Sewri	Worli
	Rs. a.	Rs. a.	Rs. a.	Rs. a.
First 3-floor rooms ..	9 8	8 8	7 0	6 0
Top floor rooms	9 0	8 0	6 8	5 8

At the beginning of the year under report, *i.e.*, with effect from 1st April 1927, rents were reduced at Naigaum to a flat rate of Rs. 7 per room for all floors and at Worli to Rs. 5 per room for all floors. At Sewri the rent of top floor rooms was raised by eight annas with effect from 1st August 1927 so as to make a flat rate of Rs. 7 for all floors in this area also. At DeLisle Road rents remained unchanged throughout the year and the reduction of eight annas in the rent of top floor rooms was continued on account of the smaller demand for them. The scale of rents at the end of the year was, therefore, as follows :—

TABLE IV

Scale of rents in March 1928

Floors	DeLisle Road	Naigaum	Sewri	Worli
	Rs. a.	Rs. a.	Rs. a.	Rs. a.
Ground floor, first floor and second floor rooms ..	9 8	7 0	7 0	5 0
Top floor rooms	9 0	7 0	7 0	5 0

Tenancies

4. The following statement shows the number of rooms actually occupied during the last week of each month during the year :—

TABLE V

Numbers of occupied rooms

Chawl centre	Number of rooms		Number of occupied rooms (including shops) month by month				
			1927				
	Constructed	Occupied on 31st March 1927	April	May	June	July	August
Naigaum ..	3,344	1,504	1,634	1,893	1,967	2,189	2,276
DeLisle Road ..	2,560	1,855	1,889	1,941	1,986	2,011	2,003
Worli ..	9,660	1,840	2,158	2,429	2,731	2,919	3,012
Sewri ..	960	766	832	849	851	848	846
Total ..	16,524	5,965	6,513	7,112	7,535	7,967	8,137

Chawl centre	Number of occupied rooms (including shops) month by month—*contd.*							Increase + or decrease — during the year
	1927—*contd.*				1928			
	September	October	November	December	January	February	March	
Naigaum ..	2,296	2,312	2,369	2,503	2,405	2,400	2,363	+859
DeLisle Road ..	1,992	1,978	1,934	1,887	1,818	1,768	1,761	−94
Worli ..	2,999	2,994	3,031	2,948	2,794	2,731	2,692	+852
Sewri ..	846	853	887	896	894	877	862	+96
Total ..	8,133	8,137	8,221	8,234	7,911	7,776	7,678	+1713

During 1926-27 there had been a steady increase throughout the year in tenancies and the year under report opened with this tendency to increase still operative. The reduction in rents at Naigaum and Worli in April 1927 further stimulated the increase in tenancies in these areas till December 1927. On 31st December 1927 the number of

tenancies was the highest on record, *viz.*, 8,234, for all areas combined. With a partial mill strike in the beginning of January 1928 the tide turned and in nine weeks tenancies were reduced by over 500, chiefly in the Worli area. Thereafter tenancies remained steady till the middle of April when all the mills were closed. Although subsequent events do not come within the scope of this report it may be recorded here that by the end of July there had been a further reduction in tenancies of 1,250 making a total since 1st January 1928 of 1,679 or 20 per cent.

5. In December 1927 the number of cotton mill tenants residing in the Development Department chawls was as follows :—

TABLE VI

Cotton mill workers residing in the Development Department chawls in December 1927

Chawl area	Total number of tenants	Number of tenants who were mill hands	Percentage of column 3 on column 2
1	2	3	4
Naigaum	2,351	1,160	49·3
DeLisle Road	1,918	1,109	57·8
Worli	2,899	1,830	63·1
Sewri	858	93	10·8
Total ..	8,026	4,192	52·2

These statistics are for registered tenants. There are, of course, many industrial workers residing in the chawls in addition to the registered tenants. It may be assumed that the proportion of mill hands among the registered tenants is about the same as their proportion among the total number of industrial workers resident in the chawls. It appears, therefore, that the mill strikes since 1st January have reduced the mill-hand population resident in the Development Department chawls by 40 per cent. The 1925 mill-strike caused a reduction of 32 per cent. in tenants equivalent to the disappearance of about 60 per cent. of the mill-hand population. It should be explained that once a strike begins no coercive measures are taken for the recovery of rent from mill hands so that those who care to remain can sit rent free till the strike is over.

Tenancies at Sewri are practically unaffected by mill strikes.

In April-May 1927 six chawls at Naigaum were allocated for the housing of Haj pilgrims; these have not been included in the tenancy returns.

The financial effects of the reduction of rents combined with increased tenancies are discussed below (paragraph 11).

Two and three-roomed tenements

6. In the previous year two chawls were converted as an experimental measure, into two-roomed and three-roomed tenements—one at Naigaum and another at DeLisle Road. The chawl at Naigaum is now fully let as two-roomed tenements with the odd rooms let singly but the chawl at DeLisle Road is still mostly vacant.

Shops

7. At DeLisle Road there are only eight shops and are all let. In other areas the number of occupied and vacant shops is as under :—

TABLE VII

Shops

Locality	Total number of shops					
	Occupied on 31st March 1928			Vacant on 31st March 1928		
	Single ~~Double~~	Double ~~Single~~	Triple	Single ~~Double~~	Double ~~Single~~	Triple
Naigaum	16	3	3	27	6	..
Worli	58	9	..	80	14	..
Sewri	18	3	..	12	2	..
Total ..	92	15	3	119	22	..

More shops are likely to be let as tenants increase.

Market at Worli

8. The ground floor of a chawl at Worli which has been converted into a market, provided with 103 stalls for the sale of mutton, fish and vegetables was opened on 1st April 1927. By October between 40 and 50 stalls were occupied but numbers subsequently declined to only 15 at the close of the year. The market, therefore, has not been a success and its opening does not appear to have appreciably increased the number of tenancies at Worli. This result, though disappointing in one sense, is interesting as the critics were wont to quote the absence of a market as a fatal defect in the scheme of things at Worli. The criticism seemed reasonable but experience has proved that it was not correct. Experience at the municipal markets at Chowpatty and Grant Road has been somewhat similar.

Rent collections

9. The following table gives an idea of the efficiency with which rents have been recovered month by month during the year :—

TABLE VIII

Rent collections

Month	Assessment of occupied rooms	Collection	Percentage of recovery
1927	Rs.	Rs.	
April	47,617	43,349	91
May	50,946	47,733	94
June	54,459	47,999	88
July	57,076	51,784	91
August	58,651	54,020	92
September	59,424	53,199	90
October	58,406	68,515	117
November	58,305	56,199	96
December	58,241	52,845	91
1928			
January	56,700	73,076	129
February	55,520	55,391	100
March	54,906	50,410	92
Total (1927-28) ..	6,70,251	6,54,520	98
1926-27	5,04,102	4,94,286	98
1925-26	4,15,598	3,46,636	84
1924-25	4,70,417	3,74,561	79
1923-24	2,64,448	2,06,514	78

10. The percentage of collections on the assessment of occupied rooms for the year was 98 approximately as for the preceding year. The year's collections would have been even more satisfactory than those of the preceding year had it not been for the partial mill-strike in January-February 1928. The high percentage of recovery for October was due to the payment in one sum of the rent amounting to Rs. 22,278 for the whole year on account of two chawls at DeLisle Road leased to the Police Department. The high percentage in collections in the month of January 1928 was due to the B. B. & C. I. Railway having paid in one sum Rs. 20,438-12-0 which covered past arrears and the rent for January in respect of five chawls at Worli leased by them.

11. In March 1927, the monthly rent roll was Rs. 47,026 and increased to Rs. 58,241 in December 1927, after which date industrial unrest imposed a check. The policy of rent reductions has thus been justified by financial results. The total assessment for the year was Rs. 6,70,251 against Rs. 5,04,102 for 1926-27—an increase of Rs. 1,66,149. In these circumstances the maintenance of rent collections at 98 per cent. of the demand was very satisfactory.

Absconderey

12. The arrears left by absconding tenants are an indication of the extent to which bad debts accrued during the year. The following statement shows the number of absconders and the amount due by them month by month in each case :—

TABLE IX

Statement of absconderey

Locality	Number of absconders and the amount lost during the month of							
	April 1927		May 1927		June 1927		July 1927	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.
Naigaum ..	27	260 0 0	14	130 8 0	4	29 8 0	23	130 0 0
DeLisle Road ..	12	268 4 0	26	518 12 0	11	323 12 0	10	162 8 0
Worli ..	26	274 12 0	37	321 12 0	45	425 8 9	43	303 8 0
Sewri ..	11	118 0 0	8	120 0 0	10	120 8 0	5	109 4 0
Total ..	76	921 0 0	85	1,091 0 0	70	899 4 9	81	705 4 0

Locality	Number of absconders and the amount lost during the month of							
	August 1927		September 1927		October 1927		November 1927	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.
Naigaum ..	22	246 0 0	44	363 12 0	32	209 4 0	23	111 12 0
DeLisle Road ..	11	90 0 0	19	384 15 0	17	277 12 0	22	494 0 0
Worli ..	36	231 8 0	69	407 0 0	59	452 0 0	58	418 9 0
Sewri ..	17	214 12 0	12	111 8 0	25	207 0 0	9	71 0 0
Total ..	86	782 4 0	144	1,267 3 0	133	1,146 0 0	112	1,095 5 0

Locality	Number of absconders and the amount lost during the month of							
	December 1927		January 1928		February 1928		March 1928	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.
Naigaum ..	36	281 0 0	93	604 10 3	57	397 12 0	57	418 0 0
DeLisle Road ..	23	348 0 0	51	820 4 0	27	510 8 9	24	349 3 9
Worli ..	109	710 8 0	92	559 0 0	70	299 12 0	67	535 0 0
Sewri ..	18	122 0 0	24	315 8 0	16	154 0 0	10	61 8 0
Total ..	186	1,461 8 0	260	2,299 6 3	170	1,362 0 9	158	1,363 11 9

13. The total amount due from the absconders in the year under report was Rs. 14,394 as against Rs. 20,830 in the previous year and Rs. 70,238 in the strike year 1925-26. Every effort is made for the recovery of arrears due from absconders and during the year the sum of Rs. 2,318 was recovered from them by the staff. The net amount still to be recovered, therefore, was Rs. 12,076 at the close of the year. This works out to 1·8 per cent. on the assessment for the year—a very satisfactory result. The rise in abscondency in the months of January, February and March was due to the partial mill strike in January and February.

Writes-off

14. The total amount written off during the year was Rs. 27,656, a large part of which was on account of the arrears of previous years. The total arrears recoverable and irrecoverable on 31st March 1928, were Rs. 57,022-3-7 as against Rs. 62,337-11-0 on 31st March 1927. The net demand for March was Rs. 54,906 so that the arrears at the close of the year represent little more than one month's rental. Another indication of the healthy state of the rent registers is the fact that out of the total rents due on account of the month of March more than one-half was paid before the expiry of the month.

Establishment charges

15. Excluding the Secretariat staff the establishment charges for the year including the staff for management, rent collection, court work and sanitation, amounted to Rs. 76,365 or 11·4 per cent. of the assessment of Rs. 6,70,251 made up as follows :—

Assistant Land Manager, Chawl Superintendents, peons and night watchmen	..	3·4 per cent.
Sanitary staff	..	5·8 ,,
Court clerk, clerks, trackers and peons	..	2·6 ,,
Accounts staff (under the Audit and Accounts Officer, Bombay Development Scheme)	..	·8 ,,

The sanitary staff comprises one sweeper for each chawl, a mucadam in charge of 20 chawls and, for the present, one sanitary inspector for the purpose of supervision. The expenditure on sanitary stores amounted to Rs. 4,725-8-0 giving a percentage of ·7 to the assessment.

Repairs and maintenance

16. No new works beyond minor additions and alterations were carried out during the year. Experiments were carried out during the monsoon to determine the steps to be taken to prevent leakage of roofs and walls, and generally to make the rooms more comfortable during the rains. All occupied chawls requiring such attention were made ready for the next monsoon. The maintenance and repairs of all chawls during the year cost Rs. 73,000 against Rs. 73,500 during the previous year. The municipal taxes amounted to Rs. 1,29,650.

Accounts

17. The accounts of the year are not yet complete. They will be published later as part of the capital and revenue accounts of the Development Department.

Amenities

18. Schools are established at Naigaum, DeLisle Road and Worli. The Infants' Welfare Society, the Y. M. C. A. and the Hindu Maha Sabha are doing excellent work in the chawl areas. A Jamboree of boy scouts who had come from all parts of India was held in December 1927 in the Worli chawl area. The open spaces were utilised for physical displays, the camp-fire and other entertainments. The scouts numbering about 7,000 were accommodated in 41 chawls which were fitted with electric lights. The sanitation of the chawls and their surroundings were greatly appreciated by the scouts and the organizers of the Jamboree.

As an experiment, four chawls at Worli have been fitted with electric lights in the passages. Owing to the mill strike they have not yet been occupied.

Two police chowkies have been established at Worli and complaints of theft, etc., are not so common as they were before. Police protection of the Worli area is now quite satisfactory.

Besides the Infants' Welfare Society's dispensaries in the chawl area at Naigaum, DeLisle Road and Worli, the Bombay Municipality has established a free dispensary at Worli.

Vital Statistics and Sanitation

TABLE X

19.

Locality	Population (approximately)	Deaths	Death rate per 1,000 (approximately)
Naigaum	11,005	286	26
DeLisle Road	9,530	257	27
Worli	13,590	334	24·6
Sewri	4,190	55	13·1
Total ..	38,315	932	24·3

The population figures in column 2 are approximately the average of the monthly tenancies (table V) multiplied by 5, that is to say, the death rate is calculated on the assumption that there is an average of five inhabitants per room.

20. During the year the sanitation of the chawls at all the four centres was satisfactory. There was no long-standing epidemic in any area. There were a few sporadic cases of small-pox and cholera; these were

immediately removed to hospital and the rooms disinfected. The Municipality has replaced kachra carts at Worli by cement concrete dust bins which are expected to be supplied to the other areas also.

General Remarks

21. There was another satisfactory increase in tenancies during the year and the high standard of rent collections of the previous year was maintained. It is clear, however, that the number of chawls at Worli is far in excess of present requirements.

The buildings have been well looked after by Rao Saheb K. C. Advani, Executive Engineer, Housing and Suburban Division, who has been most attentive to the comfort of the tenants. I have to acknowledge also the careful management of Mr. R. Hogan, the Assistant Land Manager, who has now reverted to the Accounts Department. During his three years' tenure of office there has been a large increase in tenancies and a notable improvement in the standard of rent collections.

I have the honour to be,

Sir,

Your most obedient servant,

R. D. BELL,

Land Manager, Development Department.

PART III

BOMBAY SUBURBAN SCHEMES

No. A.D.M. 63.

OLD CUSTOM HOUSE YARD, FORT, BOMBAY,

Dated the 9th August 1928.

From

THE COMMISSIONER,

Bombay Suburban Division ;

To

THE SECRETARY TO GOVERNMENT,

Development Department, Bombay.

Subject.—Annual report on the working of the Development Department, for the year 1927-28.

Sir,

I have the honour to submit the annual report on the operations of the Development Department in the Bombay Suburban Division during the year 1927-28.

I.—Suburban Schemes of the Development Department

The sales of land were not so satisfactory as in the previous year. A total area of 26,499 square yards valued at Rs. 1,69,319 and distributed over the various schemes as shown below was disposed of during the year :—

TABLE I

Scheme No.	Disposed of during 1927-28		Total disposed of upto 31st March 1928	
	Sq. yds.	Valuation	Sq. yds.	Valuation
		Rs.		Rs.
III, Chembur	4,188	12,120	144,729	3,34,086
VI, Danda	1,157	9,408	20,928	1,55,901
VII, Khar Model Suburb ..	19,180	1,35,015	220,788	13,02,548
VIII, Chapel Road, Bandra ..	1,974	12,776	101,591	4,22,811
XVIII, Kirol, North ..	....	....	1,620	8,380
Total ..	26,499	1,69,319	489,656	22,23,726

The state of sales as compared with those of the previous two years is exhibited in the following table :—

Statement showing disposal of land in Suburban Schemes

TABLE II

Scheme No.		Valuation of land disposed of		
		1925-26	1926-27	1927-28
		Rs.	Rs.	Rs.
III, Chembur	Sales ..	6,063	3,249	10,320
	Settlements ..	1,85,525	23,000	1,800
VI, Danda	Sales ..	45,151	10,295	9,408
	Settlements ..	57,969	....	....
VII, Khar Model Suburb ..	Sales ..	3,15,262	1,90,695	1,35,015
	Settlements ..	5,247	....	....
VIII, Chapel Road, Bandra.	Sales ..	23,603	7,323	12,776
	Settlements ..	1,939	238	....
XVIII, Kirol, North ..	Sales ..	....	3,080	....
	Settlements ..	1,04,273	....	....

The actual receipts from the sales of land and settlements in the various schemes were as shown below :—

TABLE III

Scheme No.	1925-26	1926-27	1927-28.
	Rs.	Rs.	Rs.
Suburban Scheme I	....	....	32,927
Suburban Scheme III	35,041	11,164	40,768
Suburban Scheme VI	36,626	32,326	29,756
Suburban Scheme VII	2,88,803	1,64,572	1,79,788
Suburban Scheme VIII	28,092	4,425	21,716
Suburban Scheme XV	49,582	9,826	....
Suburban Scheme XVI	....	....	300
Suburban Scheme XVIII	2,970	110	5,019

The state-aided building scheme continued to encourage the purchase of plots in Suburban Scheme No. VII, Khar. The sub-joined table shows the comparative figures for the last three years.

TABLE IV

Year	No. of persons who were granted advances	Total amount advanced on land and buildings
		Rs.
1925-26 ..	33	2,85,215
1926-27 ..	34	2,25,137
1927-28 ..	58	3,14,252

A further area of 2,478 acres was released by denotification during the year. The total area denotified up to the close of the year was 10,734 acres.

2. The Suburban Schemes of the Development Department are reviewed in detail below. The capital and revenue accounts are prepared separately by the Audit and Accounts Officer. The financial position of the various schemes is therefore not examined in this report; each scheme is now being investigated by the Finance Sub-Committee appointed by the Special Advisory Committee who will report to Government on the financial condition of each scheme.

3. No works were undertaken nor was there any change in the position in regard to any of the following schemes, referred to in para. 3 of the last year's report :—

No. 4 Trombay West,
No. 5 Malavni,
No. 9 Murzabanabad,
No. 11 Rann of Juhu,
No. 12 Suburban Trunk Road,
No. 13 Salsette Drainage,
No. 14 Mogra,
No. 20 Khopoli.

Residential Schemes

4. *Suburban Scheme No. 3 (Trombay North West).*—The roads in the area purchased by the St. Anthony's Homes Co-operative Society were completed and water supply laid along them. Out of the 100 plots measuring about 66,410 square yards purchased by the Society in Sector A, the Society has been able to dispose of 50 and are about to take in hand the construction of a few bungalows. As soon as these are built there will, it is hoped, be some demand for plots in this sector. The Society purchased an additional area of 9,680 square yards for a recreation ground for the girls' school, which they propose to build in the scheme area. The model cottage near Chembur station, with the plot on which it stood, was sold during the year for Rs. 9,000.

The right of collecting landing and stacking fees at Pestom Sagar Bunder was, during the year, granted on a ten year's lease. This will bring into use this bunder which, as stated in last years' report, it was originally intended to utilise for the lime-burners of Kurla. These people have, however, declined to move from their present location. The bunder should prove useful to the public, particularly to builders at Chembur. An area of 32 acres from this sector was returned under settlement to the original owners while the sale to the Bombay Municipality of an area of 10 acres is under consideration.

Suburban Scheme No. 6 (Danda).—With a view to accelerate sales in this scheme Government reduced the selling rates, which now range from Rs. 6-8-0 to Rs. 11 per square yard, according to the situation and amenities of the plots. Large plots will also be split into small plots if

so desired by intending purchasers. The introduction of electric lights and fans should popularise this area. During the year a sum of Rs. 3,520 was paid to the Bandra Municipality for the provision of electric lights along the roads. Four bungalows have so far been built and two are in course of construction.

Suburban Scheme No. 7 (Khar Model Suburb).—The demand for land continues to be greatest in this scheme which the state-aided building scheme has popularised. The plots in the scheme are situated close to Khar Railway station which can now be reached within 35 minutes by rail, either from Victoria Terminus on the G. I. P. Railway or from Churchgate on the B. B. & C. I. Railway. In addition to quick transport, electric lighting and fans have recently been introduced into the scheme by Messrs. Killick Nixon & Co. and Callender's Cable and Construction Co., Ltd. Bus services now run through the scheme to the station. The 1st and 14th road and a part of the 15th road in the western sectors, C and D, were completed in all respects including the filling in of the low land in a belt about 150 feet wide, north of the 1st road. Proposals for a permanent water service along the 1st road were considered and an estimate amounting to Rs. 7,507 for the work has been approved by Government. The proposal made to the Bandra Municipality to shift the market site from its present position in sector A to one nearer the Railway station and parallel to the Railway line has not been accepted by the Municipality, but they have agreed to the alternative proposal that the present market site should have access only from the 5th road so that there will be no interference with traffic on the 1st or main road. As the market is expected to be constructed in the ensuing year, several inquiries for plots in sector A round about the market site and near the Railway station have been received and a few sales have been effected. In sector B, which lies between the Bandra-Ghodbunder Road and Linking Road, only a few plots remain for sale. The plots in sectors C and D, ~~east~~ west of Linking Road, have not hitherto sold as readily as plots in sectors A and B chiefly because they are a little larger and the rates per square yard a little higher. Selling rates have now been reduced to ensure quicker disposal.

In all 160 bungalows have so far been built and 25 are under construction in all the four sectors. The proposal to continue 1st road westwards across the Danda-Pali Road to link up with Carter Road on the Sea Face is still under investigation.

Suburban Scheme No. VIII (Chapel Road, Bandra.)—Out of the four plots made out of the recreation ground Government have decided to sell only two in order to leave a sufficient area for recreation purposes. Only four plots remained for sale at the close of the year under report. In all 40 bungalows have so far been built and 6 more are under construction in this scheme.

Suburban Scheme No 16 (Shahar).—In the Shahar sector an area of 31 acres was sold in an undeveloped condition to the Salsette Catholic Co-operative Agricultural Association for poultry farming and cultivation.

The layout of the Kole-Kalyan sector had to be revised owing to the shifting up the Central Salsette Tramway station to the north of the military road and the revised layout is now under the consideration of Government. A layout of the Andheri sector has also been submitted to Government for sanction. With the Central Salsette Tramway now running from Andheri to Wadhavli there is likely to be a demand for building plots in these areas as soon as one or two roads are constructed in each.

Suburban Scheme No. 18 (North Kirol).—There has been no demand for land in this scheme and Government have now sanctioned a reduction of the selling rates. In the western sector of this scheme Government have decided to sell land in its present condition without incurring any expenditure on development. So far an area of 6,067 square yards has been sold.

Suburban Scheme No. 24 (Willingdon South).—During the year an area of 11,304 square yards was sold to the Catholic Co-operative Housing Society at Rs. 2-4-0 per square yard and an area measuring 2,000 square yards to the Willingdon Catholic Gymkhana for recreation purposes at the reduced price of Rs. 2,500. The Society has started the work of filling in the lowlying portion and of making roads in the area sold to it, which is likely to be fully built upon in a short time.

INDUSTRIAL SCHEMES

5. *Suburban Scheme No. 1 (Kurla-Kirol).*—There was no development in this scheme during the year.

Suburban Scheme No. 2 (Trombay - North-East).—The Bombay Improvement Trust's Dharavi scheme having been finally abandoned, the large area intended for the accommodation of the tanneries in this scheme will no longer be required for that purpose. The Collector has proposed that the area should be divided into suitable plots and offered to the public for sale. There are occasional enquiries for factory and workshop sites in this locality which may yet develop on these lines.

Suburban Scheme No. 15 (Ambernath).—There were no developments in this area during the year.

WATER SUPPLY SCHEMES

6. *Suburban Scheme No. 19 (Salsette Water Supply).*—(*a*) The following sub-schemes for water supply were completed during the current year :—

(1) Scheme for water supply to Ghatkoper.

(2) Scheme for water supply to Vile Parle Town Planning Schemes (except T. P. S. No. 6).

(3) Scheme for water supply to the Theosophical Society at Juhu.

(*b*) The work for a pipe line to Versowa was started late in the year but has since been completed.

(*c*) Proposals for extension of water supply along—

(1) the 1st road in sector C and D of Khar ;

(2) the roads in Santa Cruz 4 and Willingdon South were submitted to Government and have been approved by them. They are likely to be carried out in 1928-29.

An important improvement was carried out in the Santa Cruz system by giving each of the two 6" and 9" mains in it direct connections from the Tulsi pipe. The improvement in question has resulted in increased pressure at the extreme ends of the system in Khar and Juhu, and there have therefore been no complaints of water not rising to the level of the first floors in these areas. A statement showing the figures of consumption, number of connections, etc., in each scheme is attached to this report (Appendix A).

Suburban Scheme No. 21 (Ambernath Water Supply Schemes).—No new works were carried out in this scheme during the year. The G. I. P. Railway were given an 8" connection for taking a maximum supply of 5 lakhs gallons a day for their works at Kalyan. The proposal for a supply to Thana was dropped by the Thana Municipality on account of the heavy cost due to the long distance from Badlapur to Thana.

The question of supply to Kalyan Municipality is still under correspondence with that Municipality.

The proposal for a supply to Badlapur village has been sanctioned by Government and formal orders are expected to issue shortly.

The details of consumption and of connections, etc., for the two years under this scheme are as under (see also Appendix A).

TABLE V

	1926-27	1927-28
(*a*) Number of connections in the scheme	21	23
(*b*) Average daily consumption in the scheme	1,20,000 Gallons	1,21,000 Gallons
(*c*) Cost of maintenance, etc.	Rs. 23,617	Rs. 19,426
(*d*) Receipts from sale of water and rent for meters	36,302	34,210

RAILWAY SCHEMES

7. *Suburban Scheme No. 17 (Central Salsette Railway).*—The negotiations for the transfer of this railway (since changed to Tramway) to the G. I. P. Railway were completed and sanctioned by the Government of India during the year, and the service commenced to run on 9th January 1928 between Andheri and Wadhavli. The fare for the whole distance (8 miles) is two annas.

Suburban Scheme No. 22 (Kurla Trombay Railway).—The G. I. P. Railway are now in charge of the whole of the Kurla Trombay Railway from Kurla station to Mandala. The permanent-way and bridges were all completed during the year and the extension to Mandala was opened for traffic on 1st July 1927.

Electric Supply

8. *Suburban Scheme No. 23 (Ambernath Electric Supply).*—The details of the consumption, cost, etc., for the two years are given below :—

Table VI

		1926-27	1927-28
1.	Total units sold ..	4,04,962	4,67,520
	(*a*) for power ..	3,50,615	4,15,720
	(*b*) for lighting ..	54,347	51,800
		Rs.	Rs.
2.	Working cost ..	27,447	33,141
3.	Revenue ..	43,199	48,622

Miscellaneous

9. *Suburban Scheme No. 10 (Aerodrome at Gilbert Hill, Andheri).*—The Government of India have now selected the Vile Parle-Juhu flats for the proposed aerodrome and the area comprised in this scheme is now available for disposal in other ways. The Collector, Bombay Suburban District, proposes that, in case the land market continues in the present depressed condition, this area should be kept in reserve for a future building scheme to be undertaken after the Khar sectors have been fully developed. He adds—

"Bombay people prefer to gravitate and settle in the suburbs as near the sea as possible and I have no doubt that if Suburban Scheme No. 10 is properly laid out and the plots are sold at reasonable prices and not at our *cost price*, there will be a good demand for land in this area. The scheme will not *pay* under any circumstances, because the initial outlay has been very heavy."

10. *The area under the control of the Collector.*—The subjoined table shows the surplus areas under the different schemes acquired but not required for immediate development and handed over to the Collector, Bombay Suburban District, for management and the income derived from them during the year :—

Name of Scheme	Approximate area under management	Income		
	Acres	Rs.	a.	p.
Suburban Scheme No. 1 (Kurla-Kirol)	458	7,273	8	1
Suburban Scheme No. 2 (Trombay N. E.) ..	238	3,662	0	0
Suburban Scheme No. 3 (Trombay N. W.) ..	203	4,078	0	0
Suburban Scheme No. 6 (Danda)	11	376	0	0
Suburban Scheme No. 7 (Khar)	35	2,785	0	0
Suburban Scheme No. 8 (Chapel Road)	2	15	4	0
Suburban Scheme No. 10 (Aerodrome)	100	2,146	15	0
Suburban Scheme No. 15 (Ambernath)	1,209	15,363	8	5
Suburban Scheme No. 17 (C. S. Railway)	88	2,100	10	0
Suburban Scheme No. 18 (Kirol North)	43	1,075	0	0
Total ..	2,387	38,875	13	6

The following table compares the income during the year with income during the preceeding three years :—

Scheme No.	Income for 1924-25	Income for 1925-26	Income for 1926-27	Income for 1927-28
	Rs.	Rs.	Rs.	Rs.
Suburban Scheme No. 1	4,995	5,079	6,551	7,274
Suburban Scheme No. 2	1,840	3,422	3,655	3,662
Suburban Scheme No. 3	2,742	1,251	2,760	4,078
Suburban No. 6	....	....	....	376
Suburban Scheme No. 7	....	1,400	1,945	2,785
Suburban Scheme No. 8	....	....	....	15
Suburban Scheme No. 10	....	....	84	2,147
Suburban Scheme No. 15	....	6,116	7,326	15,364
Suburban Scheme No. 17	175	236	648	2,101
Suburban Scheme No. 18	1,000	662	533	1,075
Total ..	10,752	18,166	23,502	38,877

The increase during the year was mainly due to the efforts of the Special Aval Karkun appointed last year coupled with the careful supervision exercised by the Mamlatdar over the Aval Karkun's work.

11. *General Remarks on Development Department Schemes.*—Activities in the departmental schemes were, as in the preceding year, at a stand-still except for water supply schemes and such roads as it was necessary to construct to meet the demand for plots for residential purposes at Khar.

12. *Town Planning Schemes.*—A complete list of the Town Planning Schemes in existence is given in Appendix B showing for each scheme the approximate area, the cost of works and the stage which it has reached. The work during the year is reviewed below :—

(*a*) No new schemes were finally sanctioned by Government during the year.

(*b*) Ghatkoper Town Planning Scheme No. II which was submitted to Government for their final sanction was returned to the Arbitrator for drawing up the final scheme without provision for works.

(*c*) Vile Parle Scheme No. 6 has been finally drawn up and submitted for the sanction of Government. The scheme when sanctioned will open up an area of 1½ lakhs square yards for residential purposes. This is the first scheme in which the plot holders have, in advance of the final sanction to the scheme, come forward with their contributions and have asked for metalled access to be provided.

(*d*) Andheri draft scheme No. 6 has been sanctioned by Government and is in the hands of the Arbitrator. At a preliminary meeting of the owners, the Arbitrator has obtained their consent to prepare the scheme with provision for works.

(*e*) The following draft schemes remained under preparation during the year :—

1. Bandra Town Planning Scheme, No. 4.
2. Juhu Town Planning Scheme, No. 1.
3. Vile Parle Town Planning Scheme, No. 5.
4. Andheri Town Planning Scheme, No. 5.

(*f*) The following draft schemes although sanctioned in preceding years by Government were pending with the Arbitrator for reasons sown against them :—

Bandra Town Planning Scheme, No. 3 Santa Cruz Town Planning Scheme, No. 5	Awaiting Government orders to proceed with the scheme.
Borivli Town Planning Scheme, No. 2	Pending arbitration on the basis of making up the road sites only.

(*g*) The works in the following schemes, *viz.* :—

(1) Vile Parle Town Planning Scheme, No. 3,
(2) Santa Cruz Town Planning Schemes, No. 4,
(3) Ghatkoper Town Planning Scheme, No. 1,

were completed, during the year and handed over to the Local Bodies concerned.

Sanction to start work in Santa Cruz Town Planning Scheme No. 3 and Vile Parle Town Planning Scheme No. 6 was received late in the year. The works are in hand and are expected to be completed during the year.

General Remarks on Town Planning Schemes

13. *Bandra Town Planning Schemes No. III and IV.*—There appears to be no hope of proceeding with the two Bandra schemes unless the Municipality adopts a more accommodating attitude in the interests of orderly development. There are signs that the Bandra Municipality will alter its previous views regarding the building limit which is one-fourth of the area in all Suburban and Town Planning Schemes.

Juhu Town Planning Scheme No. 1.—Owing to differences of opinion among the land owners this scheme has remained in suspense and since the close of the year the sanction to the making of the scheme has lapsed under section 10 (3) of the Act. The local authority cannot apply for fresh sanction till October 1929. Meantime the owners in the north of the island are inconvenienced, especially during the monsoon, by the lack of a metalled road and under the pressure of this necessity opinion seems to be gathering in favour of further steps. Enquiries are therefore in progress with a view to framing fresh proposals which will find acceptance when the Municipality is able to apply for fresh sanction. It would be a grave pity if this area were allowed to be built over on a defective layout.

Vile Parle Town Planning Schemes.—The Town Planning Schemes which have already been completed or are nearing completion in Vile

Parle consist of nearly *sixteen* miles of roads and the Notified Area Committee, which will shortly be converted into a Municipality, will be faced with the problem of adequately maintaining these roads with its slender resources. There are already complaints from the owners in Scheme Nos. 2 and 4 which have been recently completed that the roads are getting into a bad condition. Unless the local authority finds money for the proper maintenance of these roads further building development in Vile Parle is likely to become unpopular with the owners who have paid heavy betterment charges. The only way to find the money required is by suitable taxation.

III—Bombay Suburban Survey.

14. The checking of the 40 feet survey sheets of Bandra and Danda was commenced on 1st April 1927 and closed on 30th June 1927 when the field work was stopped on account of the rains. It was restarted on 3rd October 1927 and continued till 1st March 1928 when under instructions from the Commissioner of Settlements, Poona, the Surveyor was put on the work of restoring the traverse frame work on the 40 feet scale in the open agricultural areas on the east side of the Khar road station, Bandra. This became necessary as the traverse stations were found to have disappeared and it was desirable to restore them before the plot hissa survey was done in the other areas. During the monsoon the surveyor was put on the work of checking the non-agricultural sanad plans of Bandra and Danda with Mr. Newland's revised maps.

During the year 300 non-agricultural sanad plans of Bandra, 166 of Danda and 124 sanctioned plans in Town Planning Schemes plots in Bandra and Danda were checked with the revised 40 feet sheets. Eighty-nine unnauthorised structures in 39 non-agricultural plots in Bandra, 62 unauthorised structures in 33 non-agricultural plots in Danda and 43 unauthorised structures in 29 plots in Town Planning Schemes in Bandra and Danda were detected and the necessary action is being taken.

The amount of Rs. 622 was realised during the year from the sale of printed maps and of blue prints of the suburban survey sheets which have not been printed. The greater demand for maps last year was due to the requirements of private companies like the Telephone Company and Killick Nixon and Company, Notified Area Committees and the District Local Board.

In order to avoid the duplication of survey work by the suburban survey office and the district survey office, Government sanctioned the Collector's proposal that the suburban survey staff and the district survey office staff should be amalgamated under the control of the District Inspector of Land Records, Bombay Suburban District, Andheri. Government have also sanctioned the proposal of the Commissioner, Bombay Suburban Division, to maintain in future the Bombay Suburban Survey only in so far as it is necessary for land revenue and land records purposes and to transfer it to the control of the Director of Land Records, Poona, from 1st April 1928.

In the reorganisation of the land records work in this district, which has been arranged by the Director of Land Records, the whole area of

the Bombay Suburban Division is now divided into seven groups under seven cadastral surveyors. There is now no separate staff for the maintenance of the suburban survey and the suburban survey sheets will in future be utilised as far as possible for revenue and land records purposes.

The post of the clerk attached to the Director of Land Records, Bombay Suburban District, and the Superintendent of Land Records, Bombay Suburban District, and Superintendent, Bombay Suburban Survey, was abolished with effect from 1st April 1928. It is also proposed to discontinue the Collector's designation as Superintendent, Bombay Suburban Survey, and Superintendent, Land Records, as his duties in this respect will in future be performed by the District Inspector of Land Records, Bombay Suburban District.

General Remarks

15. The Collector reports that the number of plans for the erection of buildings in suburban and town planning schemes sanctioned by him during the year as Salsette Development Officer was 289 as against 232 in 1926-27. This is a striking illustration of the growing desire, even at a time of industrial and trade depression, among the lower middle and middle classes to live outside the city in healthy surroundings, on sites and in residences which are their own property. The Collector, without the aid of a regular staff of building inspectors, has to see that all buildings are constructed in accordance with the sanctioned plans and this entails a heavy burden on him and his staff. The fact that during the year he detected, with the help of an inadequate staff, over 150 cases of infringements of the building regulations shows that the problem of developing Salsette on sound sanitary lines is not an easy one. He complains that the public give little help and the detection of infringements of the regulations—encroachments, unauthorised storeys and verandahs, unsanctioned and ill-sited latrines and the like—depends entirely on the energy of the inspecting staff and their Supervising Officer. As the Collector says—

> "Till the sanitary conscience of the public is sufficiently educated the great desideratum in Salsette, in order that it should always remain an attractive residential suburb for Bombay people, is close and still closer supervision over buildings and checking of the tendency to fall back into slum conditions."

16. I have again to acknowledge the good work of Rao Saheb K. C. Advani, Executive Engineer, Suburban Division, under the superintendence of Mr. A. X. Moraes, Superintending Engineer, N. C., in connection with the execution of works in departmental and town planning schemes and the administration of the water and electric supply charges. Mr. K. R. Doctor has been an excellent Personal Assistant to the Land Manager in the disposal of lands, as arbitrator in town planning schemes and as the officer in charge of land acquisition and the legal proceedings which are its usual aftermath. Mr. S. M. Bharucha, Collector, Bombay Suburban District, has completed another

heavy year's work in which he has been concerned with all the various activities of the Development Department in his district. Mr. H. St. C. Smith has, as usual, performed his duties as Assistant Commissioner to my entire satisfaction.

I have the honour to be,
Sir,
Your most obedient servant,

R. D. BELL,
Commissioner, Bombay Suburban Division.

APPENDIX A

Serial No.	Name of Scheme	Number of connections in the scheme on		Average daily consumption in the scheme during	
		31st March 1927	31st March 1928	1926-27	1927-28
1	2	3	4	5	6
	Suburban Scheme No. 19			Gals.	Gals.
1	Andheri and Marol	275	285	109,400	128,500
2	Vile Parle	....	95	....	13,700
3	Santa Cruz and Juhu	311	320	152,700	170,500
4	Suburban Scheme No. VII Khar ..	124	165	25,800	44,400
5	Bandra	....	....	382,000	400,100
6	Kurla	....	....	627,000	650,000
7	Trombay Suburban Schemes Nos. II and III.	35	45	34,000	39,600
8	Ghatkoper	....	59	....	15,300
	Suburban Scheme No. 21				
9	Ambernath	21	23	120,000	121,000

Serial No.	Name of Scheme	Cost of maintenance including purchase of water from Bombay Municipality and cost of new meters supplied		Receipts from sale of water and rent for meters	
		1926-27	1927-28	1926-27	1927-28
1	2	7	8	9	10
	Suburban Scheme No. 19	Rs.	Rs.	Rs.	Rs.
1	Andheri and Marol	24,594	22,904	36,432	41,054
2	Vile Parle	....	7,907	190	3,978
3	Santa Cruz and Juhu	32,500	34,233	49,261	60,234
4	Suburban Scheme No. VII Khar ..			7,107	16,538
5	Bandra	43,868	45,417	59,982	64,132
6	Kurla	56,056*	72,376	78,076*	1,00,923
7	Trombay Suburban Schemes Nos. II and III.	9,734	9,353	13,040	8,268
8	Ghatkoper	....	9,576	15	3,653
	Suburban Scheme No. 21				
9	Ambernath	23,617	19,426	36,302	34,210

REMARKS :—(1) *Columns 7 and 8.*—Cost of maintenance does not include interest on Capital, depreciation and over-head establishment and general charges.

(2) *Columns 9 and 10.*—Receipts do not include premium and connection fees, which are credited to the capital account.

* For three quarters' periods only.

R. D. BELL,
Commissioner, Bombay Suburban Division.

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Government of Maharashtra
on 20 July, 2017

APPENDIX B

Locality and Scheme	Approximate area in acres	Cost of works under section 3	Present state
Bandra			
		Rs.	
T. P. Scheme, No. 1 ..	5·68	22,647	Complete.
Do. No. 2 ..	21·82	14,432	Do.
Do. No. 3 ..	170·53	8,43,000	Draft scheme sanctioned and scheme with Arbitrator.
Do. No. 4 ..	63·75	72,347	Draft scheme under preparation.
Do. No. 5 ..	1·08	*Nil.*	Complete.
Santa Cruz			
T. P. Scheme, No. 1 ..	36·71	20,930	Complete.
Do. No. 2 ..	145·15	2,72,440	Do.
Do. No. 3 ..	46·81	1,48,335	Final scheme sanctioned and works in progress.
Do. No. 4 ..	69·96	1,44,191	Complete.
Do. No. 5 ..	120·63	1,85,000	Draft scheme sanctioned and scheme with Arbitrator.
Juhu			
T. P. Scheme, No. 1 ..	133·14	1,00,000	Draft scheme under preparation.
Vile Parle			
T. P. Scheme, No. 1 ..	36·49	37,877	Complete.
Do. No. 2 ..	86·01	2,01,579	Do.
Do. No. 3 ..	56·70	1,26,457	Do.
Do. No. 4 and 4A.	5·69	11,990	Do.
Do. No. 5 ..	92·93	1,65,282	Draft scheme under preparation.
Do. No. 6 ..	38·21	64,342	Final scheme submitted to Government.
Andheri			
T. P. Scheme, No. 1 ..	10·39	1,797	Complete.
Do. No. 2 ..	52·64	32,530	Do.
Do. No. 5 ..	87·83 (Sector A).	2,39,413	Draft scheme under preparation.
Do. No. 6 ..	55·72	1,53,465	Draft scheme sanctioned and scheme with Arbitrator.
Malad			
T. P. Scheme, No. 1 ..	44·73	24,111	Complete.
Borivli			
T. P. Scheme, No. 1 ..	76·06	8,309	Complete.
Do. No. 2 ..	102·82	1,37,900	Draft scheme sanctioned and scheme with Arbitrator.
Ghatkoper			
T. P. Scheme, No. 1 ..	14·55	37,723	Complete.
Do. No. 2 ..	43·45	1,77,787	Scheme with Arbitrator for revision.

R. D. BELL,
Commissioner, Bombay Suburban Division.

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